

시간 제한	메모리 제한
1.5 초 (하단 참고)	256 MB

## 문제

You have  $N$  plushie toys that are numbered from 1 to  $N$ . You want to partition them into two groups. Some pairs are not so friendly to each other (e.g., a doggy toy and a kitty toy, or a Batman toy and a Joker toy), and you can't keep such pairs in the same group.

For instance, let  $N = 3$  and  $\{(1, 2), (2, 3), (3, 1)\}$  represent unfriendly pairs of toys (that is, toy 1 and toy 2 cannot be in the same group, and so on). In this case, it is impossible to divide toys into two groups while keeping unfriendly pairs separated.

In another example, let  $N = 4$  and  $\{(1, 2), (2, 3), (3, 4), (4, 1)\}$  represent unfriendly pairs of toys. In this case, we can divide them into two groups  $\{1, 3\}$  and  $\{2, 4\}$  so that all unfriendly pairs are separated.

Given  $N$  toys and  $M$  unfriendly pairs, decide whether you can divide them into two groups so that every unfriendly pair would be separated.

## 입력

The first line will contain the number of test cases,  $T$ .

For each test case, the first line will contain two integers,  $N$  and  $M$ , separated by a whitespace.

Each of the next  $M$  lines will contain a pair of integers (an unfriendly pair) separated by a whitespace.

## 출력

For each test case, output "YES" if  $N$  toys can be divided into two groups with all unfriendly pairs separated; otherwise output "NO" (all in uppercase except quotes; quotes here are for clarity).

## 제한

- $1 \leq T \leq 10$
- Each unfriendly pair will contain two distinct numbers
- In each test case, no unfriendly pairs will be given as input more than once (i.e., if "x y" is a part of input, then no more "x y" or "y x" will be given for the same test case)

## 서브태스크 1 (4점)

- $3 \leq N \leq 16$
- $1 \leq M \leq 16$

## 서브태스크 2 (8점)

- $3 \leq N \leq 300,000$
- $1 \leq M \leq 300,000$

## 예제 입력 1 복사

```
3
3 3
1 2
2 3
3 1
4 4
1 2
2 3
3 4
4 1
6 6
1 2
2 3
1 4
1 5
6 2
4 6
```

### 예제 출력 1 복사

```
NO
YES
YES
```

Case 1 and Case 2 were discussed in the problem statement.

In Case 3, {1, 3, 6} and {2, 4, 5} would be a valid partition.

### 시간 제한 안내

아래 적혀있지 않은 시간 제한은 언어 도움말 (/help/language)에 적혀있는 기준을 따른다.

- Java: 4초
- Python 3: 6초
- PyPy3: 6초

### 채점

- 예제는 채점하지 않는다.